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June 3, 2014

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June 19: Senate panel hearing to consider the

nomination of Dr. Monica C. Regalbuto to be Assistant Secretary of Energy for Environmental Management

Senate Armed Services Committee
Hearing Date: June 19, 2014 (9:30 AM)
LINK

This hearing will be webcast and is to consider the nominations of:

Dr. Laura J. Junor
to be Principal Deputy Under Secretary of Defense for Personnel and Readiness

Mr. Gordon O. Tanner
to be General Counsel of the Department of the Air Force

Ms. Debra S. Wada
to be Assistant Secretary of the Army for Manpower and Reserve Affairs

Ms. Miranda A.A. Ballentine
to be Assistant Secretary of the Air Force for Installations, Environment, and Energy

Dr. Monica C. Regalbuto
to be Assistant Secretary of Energy for Environmental Management

Waste Isolation Pilot Plant Nitrate Salt Bearing Waste Container Isolation Plan

DOE
Prepared in Response to New Mexico Environment Department Administrative Order 05-20001 Issued May 20, 2014
LINK

The purpose of this document is to provide the Plan required by the New Mexico Environment Department (NMED) Administrative Order 05-20001 (Order) issued on May 20, 2014 to the U. S. Department of Energy (DOE) and Nuclear Waste Partnership LLC (NWP), collectively referred to as the Permittees. The Order, at paragraph 22, requires the Permittees to submit a WIPP Nitrate Salt Bearing Waste Container Isolation Plan (Plan) for identified nitrate salt bearing waste disposed in the Waste Isolation Pilot Plant (WIPP) underground disposal facility. The Order also requests an implementation schedule for this Plan. The Plan and schedule is due by 2:00 p.m. on May 30, 2014. The Order requires that the Plan include "a detailed proposal for the expedited closure of underground Hazardous Waste Disposal Unit (HWDU) Panel 6, so that a potential release from any nitrate salt bearing waste containers in Panel 6 does not pose a threat to human health or the environment." It also requires "a detailed proposal for the expedited closure of underground HWDU Panel 7, Room 7, so that a potential release from any nitrate salt bearing waste containers in Panel 7, Room 7, does not pose a threat to human health or the environment." Additionally, the Order requires information regarding the "volumetric flow rate for ventilation in the WIPP underground, a description of how the volumetric flow rate is protective of human health and the environment, and a description of how volumetric flow rate will be achieved while the WIPP Nitrate Salt Bearing Waste Container Isolation

Plan is implemented."

DOE: Los Alamos won't meet deadline to dispose of waste

Albuquerque Journal
May 30, 2014
LINK

Los Alamos National Laboratory will not meet the June 30 deadline to permanently dispose of some 3,706 cubic meters of nuclear waste, the Department of Energy confirmed Friday.

The plan known as the "3706 Campaign" became derailed due to an underground fire and subsequent radiation release from the Waste Isolation Pilot Plant near Carlsbad -- the planned final resting place for the waste.

About 93 percent of the waste has been removed from LANL over the past two years, according to the New Mexico Environment Department, which ordered the removal after a 2011 wildfire threatened the drums.

The confirmation makes official what was already a likely conclusion: A drum from a stream of LANL waste is the focus of the investigation into what happened at the WIPP underground repository to cause the radiation release. A reaction occurred in at least one LANL drum, generating enough heat to crack the lid.

WIPP has been closed to waste shipments since the Feb. 5 fire and Feb. 14 radiation release.

The New Mexico Environment Department said Friday in a statement that it "is disappointed but not surprised."

"The state will review potential options in regards to the larger consent order for all legacy waste clean-up at LANL, including DOE's track record at LANL," NMED said. "As soon as the WIPP is able to safely resume operations, NMED will aggressively push DOE to complete the 3706 Campaign."

WIPP managers have said it could be three years before the plant is reopened.

Before the removal campaign began, the drums of radioactive waste at LANL had sat idle above ground for decades. Gov. Susana Martinez made their removal a priority of her administration. The 2011 Las Conchas wildfire burned to within 3.5 miles of the drums' storage area

Mother lode of chromium at Hanford excavated

Tri-City Herald
May 31, 2014
LINK

The largest source of chromium contamination near the Columbia River at

Hanford has been removed after workers dug up contaminated soil down to groundwater 85 feet deep.

Over the years Hanford officials had talked about finding the mother lode of chromium in the soil that was contaminating groundwater near the former D and DR Reactors and then the river, said Mark French, Department of Energy project director for the work.

"Once we started digging, it became obvious this was it," he said. It was the largest source of chromium contamination near the Columbia River, he said.

Two new groundwater treatment systems have been built near the horn of the Columbia River as it passes through Hanford, one near the D and DR Reactors and another nearby close to the H Reactor.

Together they can treat 50 million gallons of contaminated water a month, replacing a smaller system that began operating in 1997. But the level of contamination was not dropping because the groundwater was being recontaminated with chromium in the soil, said Dwayne Crumpler, a hydrogeologist for the Washington State Department of Ecology.

Now some initial tests show promise that the level of contamination in the groundwater is starting to go down, he said.

"We've got the source," he said.

Sodium dichromate, which was added as a corrosion inhibitor to river waster used to cool Hanford reactors that produced weapons plutonium, was brought in by railcar in large quantities and then diluted for use in the reactors. It leaked from pipes or spilled to contaminate the soil.

The form of chromium contaminating Hanford groundwater can cause cancer in humans and is particularly toxic to fish and other aquatic life, including salmon fry from spawning areas in the river near the D and H reactors.

To remove the contaminated soil, a Washington Closure Hanford team dug down to groundwater at three places near the D and DR Reactors. Two of the dig sites would merge into one near the D Reactor, but the other dig site is the largest.

Enough soil was excavated there to create a hole covering the area of about seven and a half football fields at the ground's surface and about one football field at the bottom.

Because of its size, the hole had to be engineered like an open pit mine.

It was designed with gently sloped sides at the top to prevent cave ins, giving way to steeper slopes about halfway down its 85 foot depth. It was built in lifts or layers of 15 to 18 feet, each with a safety shelf to catch any falling rocks.

This is the second time that Washington Closure has dug up chromium-contaminated soil down to groundwater 85 feet deep near the river. The strategy was used successfully near Hanford's C Reactor in a dig

completed in 2012.

Among the tips picked up from the first deep dig was the value of collecting samples of soil as the dig was in progress, French said.

In some places the chromium contamination is obvious, marked by a bright green-yellow stain. But soil contaminated with lower levels of chromium may not be discolored.

In addition, workers learned to put down thick pads to be linked together to keep truck tires from becoming contaminated.

Work was carefully managed, with trucks coming and going up and down ramps into the hole, to do the work safely, French said.

About 785,000 cubic yards of soil was removed at that largest dig site and about half as much was removed from the smaller site.

About a third of that soil was contaminated and was disposed of at the Environmental Restoration Disposal Facility, a lined landfill in central Hanford. The most heavily contaminated soil was mixed with cement to contain the chromium before it was added to the landfill.

Some of the clean soil removed from the holes was used to backfill a nearby area excavated as part of earlier environmental cleanup work. But the rest of the clean soil has been piled around the holes, said Dean Strom, the Washington Closure project manager overseeing the work.

Digging has stopped, but Hanford officials are waiting for testing of samples to be completed to confirm that chromium contamination is gone.

Then work to backfill the holes will begin, likely in October, Strom said. Refilling the holes is expected to take about eight months. Then the surface of the ground will be replanted, likely starting in late 2015.

Removing the chromium contamination from the soil was significant, in part, because contamination was already reaching the river, French said. Longer term it will reduce the time that groundwater treatment systems need to be operated, he said.

Hanford ready to try new system to empty tank

Tri-City Herald
June 2, 2014
LINK

Work could start late this week to use a new technology to empty radioactive waste from an underground Hanford tank suspected of leaking in the past, according to Washington River Protection Solutions.

Nearly a year ago, workers cut a hole in single-shell Tank C-105 to install a riser large enough to insert a new robotic arm.

That arm -- the Mobile Arm Retrieval System, or MARS -- is much bigger, tougher and more versatile than technologies previously used to empty waste from tanks.

It has been used in another tank, C-107, but with a sluicing system that added liquid to the tank. This time, a new MARS vacuum system will be used.

The vacuum system was developed for use in tanks that require special handling. Sluicing, a commonly used technology that relies on liquid to break up waste and move it toward a pump, could cause them to leak.

The goal is to remove waste from single-shell tanks and store it in sturdier double-shell tanks until it can be treated.

Work stopped this spring with the MARS sluicing system in Tank C-107 after two different attachments failed to get all the waste out. The Department of Energy has directed that a third system be used in the tank, and work is paused at Tank C-107 until that system is selected.

In the meantime, work will start on Tank C-105 with the MARS vacuum system. Work can be done on only one of the two tanks at a time because they use the same infrastructure for waste retrieval.

For the new MARS vacuum system, liquid is injected through a a system above the waste to create a vacuum that pulls up the waste from the tank. The liquid stays in the retrieval system and is not introduced into the tank.

The system was designed and built by Columbia Energy and Environmental Services of Richland and tested for hundreds of hours on a mock tank, showing it could remove sludge, rocks and sand, as well as the hard-packed waste found at the bottom of some tanks.

Other vacuum systems have been used to empty some of the smallest underground tanks at Hanford. But the work was very slow even for small quantities of waste -- about 2,000 gallons -- and the vacuums were not powerful enough to pull up the heaviest waste at the bottom of some tanks.

Tank C-105 has 132,000 gallons of waste from past chemical processing to remove weapons plutonium from fuel irradiated at Hanford reactors.

The only known drawback to the MARS vacuum system is that it is too large to fit down the 12-inch diameter risers that provide the only access into the older, underground tanks.

To prepare to insert MARS into Tank C-105, Washington River Protection Solution workers had to dig up the dirt covering the top of the underground tank, then cut a 55-inch-diameter circle to remove a portion of the tank dome to allow a larger riser to be inserted. It's only the second time a Hanford tank holding waste has been opened up.

On the first tank at which MARS has been used, Tank C-107, waste pumping started in fall 2011. But the system has been down for long stretches, not because of problems with the MARS technology, but because of the failure of pumps used in harsh radiological environments.

The state of Washington had expected the tank to be emptied in March.

A sluicing system worked well to remove about 88 percent of the waste in the tank, according to Washington River Protection Solutions. Then high pressure liquid was used to attack the hard waste beneath the sludge that made up most of the tank's waste.

However, that stopped being effective with about 7 percent of the 253,000 gallons of waste in the tank remaining.

Hard chunks of waste at the bottom of the tank are too large to be pumped out and a "bathtub ring" remains of hard, crusted waste on the tank's wall, said Rob Roxburgh, Washington River Protection Solutions spokesman.

Using a hot water wash is being considered as the third system for the tank, although a decision has yet to be made, he said.

One of the benefits of MARS is that it is equipped with multiple systems, Roxburgh said, and a hot water wash could be done using the MARS system already in the tank.

Work also has stopped to empty Tank C-102 with a sluicing system. About 98,000 gallons of 316,000 gallons have been removed. Now Hanford officials are considering whether more sludge can be put in the double-shell tank that's receiving the waste. Concerns were raised that if the sludge gets too deep in a double-shell tank, a bubble of flammable gas could build up.

DOE is required under the court-enforced consent decree to have waste removed from all 16 tanks in the group called C Tank Farm by the end of September. Waste retrieval is continuing on four of the tanks. DOE is waiting to hear from the state if enough waste has been removed from two more of the tanks or if it must continue waste retrieval on a total of six tanks.

NNSA approved UPF management changes

Frank Munger's Atomic City Underground
June 1, 2014
LINK

The National Nuclear Security Administration, as would be expected, gave its blessing to the leadership changes taking place at the Uranium Processing Facility -- a big project in transition. "NNSA approved the UPF management changes," federal spokesman Steven Wyatt said.

Consolidated Nuclear Security, the incoming contractor at Y-12, effective July 1, announced late last week that Brian Reilly -- a senior exec at Bechtel -- would replace Carl Strock as UPF project director. CNS spokesman Jason Bohne also confirmed that Mike Pratt is replacing Mark Seely as project manager.

Both appointments are effective June 9, Bohne said.

Although B&W Y-12 is still the managing contractor at Y-12 for another month, the changes were a decision of Consolidated Nuclear Security, which got the OK to move forward with project changes in advance of the

official transition at Y-12.

"CNS drove the change and proposed the early start date," Bohne said in email response to questions. "B&W Y-12 agreed that the change could happen before July 1."

DOE appoints new Idaho cleanup manager

Associated Press
June 1, 2014
LINK

IDAHO FALLS, Idaho (AP) -- The U.S. Department of Energy has named a new deputy manager to oversee cleanup and nuclear waste management at the agency's Idaho desert site.

Jack Zimmerman has more than 25 years of experience in nuclear operations, project management and environmental management, including 18 years with Department of Energy. Most recently, he served as program manager at the DOE's Portsmouth Paducah Project Office in Kentucky.

The Post Register reports (http://bit.ly/1kfINz1) that Zimmerman will assume his new duties in July. He succeeds Jim Cooper, who will retire at the end of July.

As deputy manager of the Idaho Operations office, Zimmerman will oversee 45 federal employees and nearly 3,000 contractor staff, who carry out environmental cleanup and nuclear waste management at the site.

House approves MOX construction funding

Aiken Standard
May 23, 2014
LINK

The United States House showed support for the Savannah River Site's MOX program on Thursday by green-lighting its version of the National Defense Authorization Bill.

The bill includes language that approves construction of the MOX facility for fiscal year 2015 rather than using funding to place it in a cold stand-by. The bill also asks for a non-partisan third party to assess a cost estimate of the program.

U.S. Rep. Joe Wilson, R-S.C., helped father the two provisions that will look to keep MOX open through the next fiscal year.

"Of the funds described in paragraph (2), the Secretary of Energy shall carry out construction and program support activities relating to the MOX facility," House members wrote in the bill.

In terms of a separate study, the bill requires the energy secretary seek to enter a contract with a federally funded research and development center

to conduct a non-partisan cost assessment of MOX and its alternatives.

"Not later than 180 days after the date of the enactment of this Act, the federally funded research and development center conducting the study after paragraph (1) shall submit to the Secretary the study, including any findings and recommendations," House members wrote in the bill.

The Act then states the secretary should issue a report on the study no more than 90 days after he receives the study.

The bill will now be passed on to the Senate, which will look to approve it before sending it to the desk of President Barack Obama for his signature.

"For far too long, Washington's budget battles have spilled into the homes of dedicated Site workers. The people of Aiken and Barnwell counties deserve consistency," Wilson wrote in a media release. "I am very pleased that a provision agreed upon in this bill supports future construction and requires a nonpartisan third party to determine a true cost estimate."

Gov. Nikki Haley's office reached out to the Aiken Standard and also voiced its support of the bill.

"Providing funding to finish the construction of the MOX facility is not just about holding the Obama administration accountable for their legal responsibilities; it's about doing what is best for South Carolina - which is why Governor Haley has fought alongside our federal delegation to ensure that it happens," said spokesman Doug Mayer. "Today, the House took a big step in the right direction and now it's time for the Senate to do the same."

The MOX program is part of a nonproliferation agreement with Russia to dispose of 34 metric tons of weapons-grade plutonium.

State and congressional leaders have heightened their support of the program since March 4 when the president's fiscal year 2015 budget proposal included placing the program in a cold stand-by.

Currently, the National Nuclear Security Administration is working with the MOX contractor to initiate the cold stand-by at the start of the fiscal year on Oct. 1.

NRC's Implementation of the Fukushima Near-Term Task Force Recommendations and other Actions to Enhance and Maintain Nuclear Safety

Senate Environment and Public Works Committee
Hearing Date: June 4, 2014 (10:00 AM)
LINK

Webcast can be accessed by clicking the red "live hearing" icon when the business meeting begins at 10:00am ET. Please note that the icon will not appear until 10:00am ET and may require your web browser to be refreshed at that time.

Witnesses

The Honorable Allison M. Macfarlane
Chairman
Nuclear Regulatory Commission

The Honorable Kristine L. Svinicki
Commissioner
Nuclear Regulatory Commission

The Honorable George Apostolakis
Commissioner
Nuclear Regulatory Commission

The Honorable William D. Magwood, IV
Commissioner
Nuclear Regulatory Commission

The Honorable William C. Ostendorff
Commissioner
Nuclear Regulatory Commission

$7 billion cleanup at Rocky Flats is complete

The Denver Post
May 30, 2014
LINK

Kaiser-Hill Co. officials on Thursday said they have completed the $7 billion Rocky Flats cleanup - a major milestone in the former nuclear-trigger plant's transformation into a public wildlife refuge.

The cleanup is the largest completed on a U.S. Department of Energy or federal Superfund toxic-waste site, project managers said.

More than 21 tons of weapons-grade nuclear material was removed, enough radioactive waste to fill a string of rail cars 90 miles long.

"When we came on board, none of this had ever been done before," said John Corsi, a Kaiser spokesman. "There were no models for us to follow."

The Energy Department has 90 days to accept the project and can ask Kaiser-Hill to address anything it finds unsatisfactory.

After that, the federal Environmental Protection Agency and state health officials must verify that the work meets cleanup guidelines.

Rocky Flats produced plutonium triggers from 1952 to 1989 for the U.S. nuclear arsenal. Every nuclear weapon in the current stockpile contains the Rocky Flats-produced component, which would help detonate the bigger bomb.

The plant, however, also left behind a trail of hazardous and radioactive contamination. At one time, the 6,500-acre site contained a building that

was so contaminated with plutonium, it was widely known as "the most dangerous building in America."

A 1994 DOE study estimated the cleanup would take 60 years and $37 billion.

Since the cleanup began in 1995, questions have been raised about its thoroughness. This summer, Kaiser-Hill discovered more than a dozen radioactive "hot spots" near an area where barrels containing plutonium-laced oil were stored.

"The question has always been about the cleanup standards: How clean is clean," said Len Ackland, a University of Colorado professor and author of "Making a Real Killing: Rocky Flats and the Nuclear West."

Once the site becomes a refuge, it will feature hiking trails, bike paths and horse-riding trails, refuge managers have said. All but about 1,000 acres will be accessible to the public.

U.S. Sen. Wayne Allard, R-Colo., helped to pass the legislation establishing Rocky Flats as a refuge.

"Rocky Flats is the best example of a nuclear cleanup success story ever," Allard said.

Feds raided Rocky Flats 25 years ago, signaling the end of an era

The Denver Post
June 1, 2014
LINK

ROCKY FLATS -- In 1989, Germans tore down the Berlin Wall. The anti-Soviet Solidarity movement pushed for power in Poland. One million Chinese in Tiananmen Square demanded reform. And Colorado was seeing the end of its own extraordinary Cold War chapter at Rocky Flats, 16 miles northwest of Denver.

Twenty-five years ago, on June 6, 1989, a convoy of about 30 vehicles carrying more than 70 armed agents of the FBI and the Environmental Protection Agency raided the U.S. Department of Energy's plutonium-processing plant at Rocky Flats for suspected environmental crimes.

The Cold War site, which operated continuously from 1952 to 1989, was the Denver area's largest industrial plant, with 4,000 men and women manufacturing plutonium fission cores used to detonate U.S nuclear bombs.

Many of the 40,000 who worked at Rocky Flats over the decades to create a nuclear deterrent became casualties of the Cold War -- with diseases caused by exposure to radiation and toxic chemicals.

It wasn't until January of this year that the government fully recognized their sacrifices with a special designation and new benefits. "Rocky Flats was nothing but a fancy machine shop ... in what was then the middle of

nowhere. But we had machining capabilities that nobody else had," said Scott Surovchak, Rocky Flats legacy site manager for the Department of Energy.

Workers here, sprawling over 800 structures on a top-secret 6,500-acre federal reservation, could drill out the center of a length of stainless steel wire thinner than a human hair to create tubing, Surovchak said. To say precision was required in making nuclear components doesn't capture it.

They worked in plutonium, uranium, beryllium, americium and other highly dangerous metals and chemicals.

But production would halt in December 1989 as the FBI executed its search warrant. Nuclear production would briefly resume the next year, then finally terminate in 1993, after President George H. W. Bush canceled the W-88 Trident Warhead Program in 1992.

A massive environmental cleanup would ensue as America's nuclear arms race with the Soviet Union, dismantled in 1991, ground to a halt.

"The 'raid' didn't end Rocky Flats," Surovchak said.

"We ran out of a mission," he said. "Our main bad guy fell apart. We broke the Soviets. And we essentially went into a mothball situation."

The new mission was cleanup and closure.

Most of Rocky Flats today is a wildlife refuge. The DOE transferred more than 4,000 acres of its peripheral lands -- its "buffer zone" -- to the U.S. Fish and Wildlife Service in 2007. DOE kept behind locked gates the site's hot buried heart -- 1,309 acres of largely cleared land called the Central Operable Unit -- for testing and treatment of the remaining immovable contamination.

The raid 25 years ago was the first time two federal agencies had assailed a third, according to University of Colorado associate journalism professor emeritus Len Ackland.

"Why was there a raid? It was very political. The symbolism of the raid was big," said Ackland, author of "Making A Real Killing: Rocky Flats and the Nuclear West."

"When Rocky Flats started production, there was no EPA, no environmental laws -- not until the 1970s," Ackland said.

The DOE's position was that it was exempt for national security reasons, he said. Then the highest echelons of the U.S. government signaled that national priorities were changing -- to balance security interests with environmental protection.

"The raid burst into the public consciousness with headlines about midnight dumpings and burnings based on search affidavits," Ackland said. "The raid succeeded in demonizing the plant in a way that hadn't happened before, not even with the 1969 fire."

That plutonium fire sent toxic smoke wafting over the Denver metro area.

But outside of a small army of protesters who frequently gathered outside the plant, public awareness of Rocky Flats remained dim before the raid.

"It was a very choreographed 'raid,' " Surovchak said.

If DOE higher-ups hadn't known beforehand about the raid, Surovchak said, "our guys would have met them with automatic weapons, and a lot of those agents would have ended up dead."

DOE security was ready to defend its large stockpile of plutonium. Materials were protected by armed guards, Surovchak said. Signs announced: "Deadly force is authorized." But most Rocky Flats workers and managers weren't forewarned about "Operation Desert Glow," and some found themselves making copies of documents at gunpoint or returning to cubicles wrapped in yellow crime-scene tape.

Rocky Flats was added to a list of high-priority Superfund sites. A new contractor, EG&G, assumed management in 1990.

DOE's contractor, Rockwell International Corp., pleaded guilty in 1992 to 10 environmental crimes and paid an $18.5 million fine.

"Every time we met with the EPA, they treated us like criminals," said Surovchak, who came to Rocky Flats in 1992.

It would take more than 10 years, until 2005, and $7 billion for contractor Kaiser-Hill to clean up the site -- including demolition of more than 800 structures and transport of more than 120 tons of materials to nuclear waste storage facilities around the region.

Remaining contaminated soil and concrete is entombed in the Central Operable Unit. The DOE, EPA and the Colorado Department of Public Health and Environment all state in stacks of reports that the public's limited exposure to contaminants at the site has not posed a significant health risk and that, outside the Central Operable Unit, Rocky Flats is ready and safe for all uses.

During one of the most difficult cleanups in U.S. history, worker numbers swelled at Rocky Flats to a peak of about 8,000. Some estimates of subcontractors brought the total closer to 12,000. But the numbers quickly dwindled.

Chuck Sisk's father helped build Rocky Flats. He himself worked at Rocky Flats from 1990 until 2004, first as an accountant and auditor. In the last five years, he packed and shipped out canisters of plutonium as the plant emptied its inventory.

Sisk suffered two exposures. Just over three years ago, he developed liver cancer and underwent a transplant operation, all covered by insurance through Kaiser-Hill. He has no regrets, he said.

"I was well-paid. I was well-informed," the 67-year-old Sisk said. "Rocky Flats has been a part of my family from the early 1950s on. It was a necessary evil. It was a requirement of the time."

For Rocky Flats workers and a substantial percentage of the 700,000

Americans nationwide who worked from 1942 until now to build, and maintain, a nuclear arsenal, the toll has been high.

Those who have become very ill believe, and Congress agreed in 2001, that their cancers, berylliosis and other respiratory ailments are likely a result of their exposure at work to radiation and toxic chemicals.

Since 2001, the federal government has been providing monetary compensation and medical benefits to former nuclear and uranium workers. But the burden of proving that those illnesses were occupational fell to the workers, who had to reconstruct personal histories of exposure to receive compensation. Records often were lost or scattered -- some say intentionally destroyed.

On Jan. 1, Rocky Flats workers became members of a "special exposure cohort." It is presumed, if they have one of 22 cancers and other specified diseases, their illnesses are work-related.

Before the designation, about two-thirds of Rocky Flats claims were denied. "The claims process is now going pretty smoothly," said Terrie Barrie, co-founder of the Alliance of Nuclear Worker Advisory Groups.

Back at Rocky Flats, Surovchak is now the last DOE man standing. Another DOE contractor, the S.M. Stoller Corp., has a dozen workers here monitoring and treating water.

"It's getting very hard to remember what it was like," Surovchak said, looking around at rolling tallgrass prairie dotted with deer and elk. A few tall evergreens stand out in a straight line -- "the Lady Bird Johnson trees" that federal installations were required to plant in the 1960s. They used to line up along buildings, now gone.

Behind locked gates, a rutted dirt road is what remains of what was, in places, a five-lane paved highway. An old rail line is idle. Only a few scattered sheds and water-treatment and testing sites, outfitted with solar arrays, interrupt a natural-looking vista.

The loudest noises when Surovchak's SUV stops rumbling is the trill of a redwing blackbird and complaint of a killdeer protecting her nest.

Woman Creek is rerouted around one of the few remaining waste-containment ponds. The scars of emptied ponds and their breached dams eventually will disappear as vegetation grows to cover them, Surovchak said.

Remembering what it was like will be the theme June 6-8 at the Arvada Center for the Arts and Humanities. The center is hosting "Rocky Flats Then and Now: 25 Years After the Raid."

The retrospective is not about rehashing old battles, event organizers said. Its aim is to educate the public and promote respectful dialogue.

The Rocky Flats story isn't finished, Ackland said. "The bombs manufactured there are still in the U.S. arsenal."

Electa Draper: 303-954-1276, edraper@denverpost.com or

twitter.com/electadraper

Event examines rocky flats legacy

A free public three-day event, "Rocky Flats Then and Now: 25 Years After the Raid," has been slated by the Arvada Center for the Arts and Humanities, the Center for the American West at the University of Colorado, Boulder, and the Rocky Flats Institute and Museum.

Opening night Friday will feature "Personal Memories of the June 6, 1989, Raid," with University of Colorado associate journalism professor emeritus Len Ackland, 41-year Rocky Flats worker Jack Weaver, environmental activist LeRoy Moore and Charlie Church McKay, whose family lost land to the federal government for the plant site.

A "Raid in Retrospect" panel 10 a.m. Saturday morning will feature former Gov. Roy Romer, former FBI agent Jon Lipsky, former U.S. Rep. David Skaggs, Kristen Iversen, author of "Full Body Burden: Growing Up in the Nuclear Shadow of Rocky Flats," and others.

The center is at 6901 Wadsworth Blvd. in Arvada.

For a full schedule , visit www.arvadacenter.org/on-stage/rocky-flats-then-and-now-2014.

NuScale and DOE Complete SMR Cooperative Agreement

Herald Online
May 28, 2014
LINK

PORTLAND, Ore. -- NuScale Power announced today that it has finalized the cooperative agreement with the US Department of Energy (DOE) as an awardee under the program for "Cost-Shared Development of Innovative Small Modular Reactor Designs." NuScale was selected as the sole awardee of the DOE round two funding in December of 2013.

The agreement calls for NuScale to receive up to $217M in matching funds over a five year period. The company will use the funds to perform the engineering and testing needed to proceed through the Nuclear Regulatory Commission Design Certification Process. NuScale expects to submit the application for design certification in the second half of 2016. This will allow NuScale to meet a commercial operation date of 2023 for its first planned project, in Idaho, with partners Energy NorthWest and Utah Associated Municipal Power Systems.

John Hopkins, NuScale Power's chairman and chief executive officer, stated, "We are pleased to have completed this agreement, initiating our partnership with DOE to develop a global-leadership position for American products in the Small Modular Reactor market. With the support of DOE and our other key partners, we are committed to pursuing commercialization and meeting the needs of our future customers."

"Small modular reactors represent a new generation of safe, reliable, low-

carbon nuclear energy technology and provide a strong opportunity for America to lead this emerging global industry," said Energy Secretary Ernest Moniz, when announcing NuScale's selection last December. "The Energy Department is committed to strengthening nuclear energy's continuing important role in America's low carbon future, and new technologies like small modular reactors will help ensure our continued leadership in the safe, secure and efficient use of nuclear power worldwide."

About NuScale Power, LLC

NuScale Power, LLC is developing a new kind of nuclear plant; a safer, smaller, scalable version of pressurized water reactor technology, designed with natural safety features. Fluor Corporation (NYSE: FLR), a global engineering, procurement and construction company with a 60-year history in commercial nuclear power, is the majority investor in NuScale. As the sole winner of the second round of the U.S. Department of Energy's (DOE) competitively-bid, cost-sharing program to develop nuclear small modular reactor (SMR) technology, NuScale's design offers the benefits of carbon-free nuclear power but takes away the issues presented by the cost of installing large capacity. A nuclear power plant using NuScale's technology is comprised of individual NuScale Power Modules(TM), each producing 45 megawatts of electricity with its own factory-built combined containment vessel and reactor vessel, and its own packaged turbine-generator set. A power plant can include as many as 12 NuScale Power Modules to produce as much as 540 megawatts. The reactor coolant is driven by natural circulation and can be shut down safely with no operator action, no AC or DC power, and no external water. NuScale power plants are scalable - additional modules are added as customer demand for electricity increases. NuScale's technology also is ideally suited to supply energy for district heating, desalination and other applications. NuScale is headquartered in Portland, Oregon and has offices in Corvallis, OR; Rockville, MD; Atlanta, GA; Charlotte, NC; and Chattanooga, TN. For more information visit: www.nuscalepower.com.

DOE IG Audit Report: Cost and Schedule of the Mixed Oxide Fuel Fabrication Facility at the Savannah River Site

DOE Inspector General
May 22, 2014
LINK

In September 2000, the United States and Russia signed a Plutonium Management and Disposition Agreement for the disposal of surplus weapons-grade plutonium. This agreement called for each country to dispose of at least 34 metric tons of plutonium by converting it into mixed oxide fuel that can be used in commercial nuclear power reactors. To carry out this program, the Department of Energy (Department) decided to construct the Mixed Oxide Fuel Fabrication Facility (MOX Facility) at the Savannah River Site near Aiken, South Carolina. Shaw AREVA MOX Services, LLC (MOX Services), the current Facility contractor, has been working on the design of the facility since 1999.

The National Nuclear Security Administration (NNSA) and MOX Services

have been largely unsuccessful in controlling the cost and schedule for the MOX Facility. A March 2012 construction project review conducted by NNSA concluded that the MOX Facility had a very low probability of being completed according to the approved baseline. NNSA directed MOX Services to develop a baseline change proposal with updated project completion, cost and schedule projections. Under the revised baseline, it was estimated that total project costs would grow to about $7.7 billion and that completion would slip to November 2019. This represents cost growth of about $2.9 billion and project schedule slippage of over 3 years.

The anticipated cost and time required to complete the MOX Facility were significantly underestimated due to a number of factors. This included, most prominently, the Department's 2007 approval of a project baseline that was developed from an immature design, understating the level of effort to install various construction commodity items, and high personnel turnover rates. Prior to approval, the Department's own independent review of the project baseline found that the design review of the MOX Facility was incomplete. We also noted that additional work scope added at NNSA's direction caused some of the cost growth in the baseline change proposal developed by MOX Services. Despite project expenditures of about $4 billion and a proposal to place the MOX Facility construction project into cold standby status in fiscal year 2015, we remain concerned with the project management issues observed during the audit.